riales bacteria associated with NEC, wherein when the amount of Clostridiales and/or Bifidobacteriales bacteria in the sample is within pre-established range of amounts of Clostridiales and/or Bifidobacteriales bacteria associated with NEC, the subject is identified as at elevated risk for developing NEC; or

(c) determining the amount of Clostridiales and/or Bifidobacteriales bacteria in samples obtained from a subject at two or more time points, wherein when the amount of Clostridiales and/or Bifidobacteriales bacteria in the samples decreases over time, the subject is identified as at elevated risk for developing NEC.

22. The method of claim **21**, wherein the subject has high intestinal permeability.

23. The method of claim **21**, wherein the subject is a preterm infant.

24. The method of claim **23**, wherein the preterm infant is an infant of less than 37 weeks of gestational age.

25. The method of claim **21**, wherein the sample is a stool sample.

26. The method of claim **21**, wherein the amount of bacteria in the sample is based on the relative abundance of one or more selected genes corresponding to the bacteria in the sample.

27. The method of claim **21**, wherein the amount of bacteria in the sample is based on the relative abundance of a 16S rRNA gene variable region of the bacteria in the sample.

28. The method of claim **21**, wherein the amount of bacteria in the sample is based on the relative abundance of the V3-V4 variable region of a 16S rRNA gene of the bacteria in the sample.

29. The method of claim **21**, wherein when samples are obtained from a subject at two or more time points in (c), the time points are separated by at least 7 days plus or minus 1 to 2 days.

30. The method of claim **21**, wherein the decrease in the amount of Clostridiales and/or Bifidobacteriales bacteria in the samples in over time in (c) is a decrease of at least about 10%.

31-103. (canceled)

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